

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A pulse generating circuit for successively outputting a pulse of positive polarity and a pulse of negative polarity, comprising:

a transformer (14) and a single switch (16) which are connected in series across a DC power supply (12);

wherein an output is produced across a secondary winding (18) of said transformer (14).

2. (Currently Amended) A pulse generating circuit according to claim 1, wherein either one of the pulse of positive polarity and the pulse of negative polarity is output in a period during which said switch (16) is turned on, and a pulse of opposite polarity is output due to electromotive forces induced when said switch (16) is turned off.

3. (Currently Amended) A pulse generating circuit according to claim 2, wherein if said DC power supply (12) has a power supply voltage V , said transformer (14) has a winding ratio n and a primary inductance value L_1 , and a current flowing through a primary winding (22) of said transformer (14) is cut off at a rate (di/dt) , then the pulse output in the period during which said switch (16) is turned on has a pulse voltage determined by nV , and the pulse of opposite polarity has a pulse voltage determined by $nL_1(di/dt)$.

4. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 3~~ claim 1, further comprising:

a capacitor (26) connected in parallel to said switch (16).

5. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 4~~claim 1, wherein a capacitive load (30) is connected across said secondary winding (18), further comprising:

a diode (32) connected in parallel to said switch (16) in a reverse orientation.

6. (Currently Amended) A pulse generating circuit according to ~~any one of claims 1 through 5~~claim 1, wherein said switch (16) comprises a semiconductor switch.